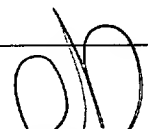


<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/606,887	DECKMAN ET AL.	
	<b>Examiner</b> <i>BR</i>	<b>Art Unit</b>	
Basia Ridley	1764		

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Election filed on 28 June 2004.
2. ☒ The allowed claim(s) is/are 1-21.
3. ☒ The drawings filed on 29 June 2000 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All   b) ☐ Some\*   c) ☐ None   of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |   |
|--|---|
| <ol style="list-style-type: none"> <li>1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)</li> <li>2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</li> <li>3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br/>Paper No./Mail Date _____</li> <li>4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br/>of Biological Material</li> </ol> | <ol style="list-style-type: none"> <li>5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)</li> <li>6. <input type="checkbox"/> Interview Summary (PTO-413),<br/>Paper No./Mail Date _____</li> <li>7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment</li> <li>8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance</li> <li>9. <input type="checkbox"/> Other _____</li> </ol> |
|--|---|

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's further election, without traverse, of Species B-1 and Species C-1 in the reply filed on 28 June 2004 is acknowledged. Claims 12, 14, 17 and 19-21 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Species.
2. Claim 1 is generic and allowable. Accordingly, the restriction requirement as to the encompassed species is hereby withdrawn and claims 12, 14, 17 and 19-21, directed to the species A-2, B-2 and C-2 are no longer withdrawn from consideration since all of the claims to said species depend from or otherwise include each of the limitations of an allowed generic claim.

In view of the above noted withdrawal of the restriction requirement as to the linked species, applicant(s) are advised that if any claim(s) depending from or including all the limitations of the allowable generic linking claim(s) be presented in a continuation or divisional application, such claims may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application. Once a restriction requirement is withdrawn, the provisions of 35 U.S.C. 121 are no longer applicable. See *In re Ziegler*, 44 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

3. Claims 22-32, directed to method for production of carbon dioxide remain withdrawn from consideration since said claims are not directed to the encompassed species as required by 37 CFR 1.141.

### ***Examiner's Amendment***

4. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure

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consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

**In the claims:**

Claims 22-32 were cancelled.

Claim 5, line 3            deleted "e. thereof."

Claim 11, line 1        deleted "11.. The reactor" and inserted --11. The reactor--.

Claim 12, line 1        deleted "12.. The reactor" and inserted --12. The reactor--.

Claim 14, line 1        deleted "14.. The reactor" and inserted --14. The reactor--.

***Allowable Subject Matter***

5.        The following is an examiner's statement of reasons for allowance:

The closest prior art of record is: Joos et al. (USP 5,729,967), Lywood et al. (USP 5,048,284), Horner et al. (USP 5,133,180) and Isomura et al. (USP 5,741,474). Isomura et al. discloses a membrane reactor for production of high-purity hydrogen required for use in fuel cells. Said reactor comprises a reforming reaction zone and a membrane for separating hydrogen from other gases produced in said reaction zone. After separation the produced, high-purity, hydrogen is passed to fuel cell and the non-permeate gasses are combusted in a combustor to supply the heat to the reaction zone. Other references disclose reactors where hydrogen is produced by reforming reactions together with other flammable gasses. In said systems the entire flammable gas stream is passed to combustor to produce heat and energy. See Joos et al., Lywood et al. and Horner et al. Since the references do not provide motivation to separate hydrogen produced in reforming reaction zone from other flammable gases before said hydrogen is passed to the combustion zone, an ordinary artisan would have not been motivated to construct the hydrogen membrane reactor

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comprising a membrane separating a reforming reaction zone from combustion zone, wherein said membrane functions to permit permeance of hydrogen produced in the reaction zone and wherein said permeated hydrogen is combusted in the combustion zone. Accordingly, the claimed hydrogen membrane reactor is allowable over the prior art of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

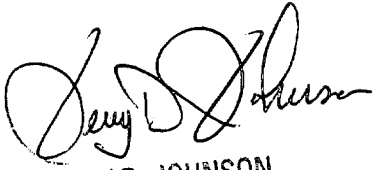
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Basia Ridley, whose telephone number is (571) 272-1453.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola, can be reached on (571) 272-1444.

The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Technical Center 1700 General Information Telephone No. is (571) 272-1700. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Questions on access to the Private PAIR system should be directed to the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).

*BR*  
Basia Ridley  
Examiner  
Art Unit 1764

  
JERRY D. JOHNSON  
PRIMARY EXAMINER  
GROUP 1100

BR  
July 26, 2004